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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/017,677

12/13/2001

Kenneth L. Levy

P0502

9557

23735 7590 01/09/2007
DIGIMARC CORPORATION
9405 SW GEMINI DRIVE
BEAVERTON, OR 97008

EXAMINER

POLTORAK, PIOTR

ART UNIT

PAPER NUMBER

2134

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

01/09/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/017,677

Applicant(s)

LEVY, KENNETH L.

Examiner

Peter Poltorak

Art Unit

2134

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 November 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

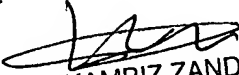
Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.


KAMBIZ ZAND
PRIMARY EXAMINER

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 5/04/06.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. The amendment received on 11/27/06 has been carefully considered.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior office action.

Response to Amendment

3. Applicant's amendments to claim 2 overcame the previously cited 35 U.S.C. 112, second paragraph rejection that, as a result, has been withdrawn.
4. Applicant remarks have been considered but are mute in light of the new grounds of rejection.
5. Claims 1-20 have been examined.

.Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 2-8, 11-17 and 20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one

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skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

7. The independent claims 1, 10 and 19 recite that an orientation (at which a forensic digital watermark signal) is selected so that it varies for different receivers and an instance of embedding corresponds to a time period of embedding the forensic digital watermark. However, claims 2-8, 11-17 and 20 suggests that the orientation specifies random time segments, frequency bands and spatial location. It is not clear how one would deliver this randomness while ensuring that the orientation varies for different receivers, especially since the last limitation in claims 1, 10 and 19 clearly suggests clearly suggests that several receivers can place watermark within the same content signal.
8. Claims 2-8, 11-17 and 20 are rejected under 35 U.S.C. 112, second paragraph, as failing to set forth the subject matter which applicant(s) regard as their invention.
9. As discussed above it is not clear how applicant attempts to ensure different orientation for different receivers, while embedding watermarks randomly in a content signal. It is not clear whether meaning of the claim language (as cited) is not understood by the examiner or whether some limitations are missing. For purposes of further examination the phrase is treated as best understood.

Claim Rejections - 35 USC § 102

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application

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by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

10. Claims 1, 10 and 18-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Conover (U.S. Patent No. 6373960).

Conover discloses receiving a media content signal, selecting an orientation for a forensic digital watermark signal to be embedded in the content signal and embedding the forensic digital watermark signal at the selected orientation in the content signal (Conover, col. 7 lines 37-47). Conover discloses that the orientation is selected so that the orientation varies for different receivers (e.g. a subsequent broadcast transmitter, satellite, CATV service, or STB, Conover col. 9 lines 15-16) to reduce interference between overlapping forensic digital watermarks embedded in the content signal by different receivers (Conover, col. 8 line 53 – col. 9 line 17). Conover also discloses that different receivers have different forensic digital watermarks, wherein the forensic digital watermark robustly associate the content signal with and an identified receiver to track the content signal to the receiver (e.g. a unique set-top box serial number, Conover, col. 14 line 56- line 15 line 5).

11. An instance of embedding inherently corresponds to a time period of embedding the forensic digital watermark.

Claim Rejections - 35 USC § 102 or 103

12. Claims 2-7, 11-17 and 20 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Conover (U.S. Patent No. 6373960).

As per claims 2, 11 and 20, Conover discloses embedding the forensic digital watermark signal at the selected orientation in the content signal, wherein the embedding applies a different orientation for different instances of embedding the forensic digital watermark as discussed above.

Furthermore, Conover discloses that the receiver selects the orientation by referring to a site data list that includes site data entries which store various data about each watermarking site that is transmitted together with the content signal in order to avoid overwriting watermarking embedded by an prior processing (col. 8 lines 53 - col. 9 line 17).

As a result, an ordinary artisan would easily recognize that implementing Conover invention in network with a plurality of devices would unlikely repeat, since content may travel through out various receivers and the process of an embedding watermarks by receivers, disclosed by Conover, is a result of prior embeddings (col. 14 lines 40-44). Allowing the orientation of the digital watermark to be random (*not enforcing that the watermark embedding is conducted the same way and by the same receivers*) would have been at least an obvious variation in order to minimize the system's complexity.

13. As per claim 3-7 and 12-17, Conover discloses that the orientation specifies, frequency and spatial alignment (e.g. col. 9 lines 18 – 55) that inherently specifies time segments of the content signal of the content signal.

However, even if Conover did not disclose that the orientation specifies spatial frequency alignment and frequency bands as well as time segments of the content

signal, implementing the orientation specifying spatial frequency alignment and frequency bands as well as time segments of the content signal would have been an obvious variation that is well known in the art. One would have been motivated to use them especially in light of the benefits of these orientations as evidenced by their commercial success.

Claim Rejections - 35 USC § 103

14. Claims 4 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Conover (U.S. Patent No. 6373960) in view of (Katayama et al. U.S. Pub. No. 20020027994).

Conver discloses the method of digital watermarking that embeds a digital watermark signal in a media content signal at the selected orientation as discussed above.

15. Conver does not teach that the orientation specifies random frequency bands.

Katayama teaches the orientation that specifies random frequency bands (Katayama [22]). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to configure Conver's invention so that the orientation specifies random frequency bands as taught by Katayama. One of ordinary skill in the art would have been motivated to perform such a modification in order to place limits/restrictions on specific frequency bands.

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16. Claims 2, 5-7, 11-12, 14-17 and 20 are rejected under as obvious over Conover

(U.S. Patent No. 6373960) in view of Venkatesan (U.S. Patent No. 6898706).

Conover's reference addresses embedding the forensic digital watermark signal at random orientation in the content signal, wherein the orientation specifies spatial locations, frequency and time alignment as discussed above.

17. Even if Conover did not address these limitations, Venkatesan disclose the random orientation of the watermark in the content defining a starting location in protected objects in time, space or frequency (Venkatesan, col.13 lines 35-49).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to implement embedding a different orientation for different instances of embedding the forensic digital watermark using keys as taught by Venkatesan into Conover's invention given the benefit of better protection against potential attacks.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter Poltorak whose telephone number is (571) 272-3840. The examiner can normally be reached Monday through Thursday from 9:00 a.m. to 4:00 p.m. and alternate Fridays from 9:00 a.m. to 3:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jacques Louis Jacques can be reached on (571) 272-6962. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



12/26/05



KAMBIZ ZAND
PRIMARY EXAMINER